Rpt. 4.

# REPORT ON MACHINERY.

No. 15493.

Received at London Office WEU. 11 NOV 1908

Date of writing Report ____ 19__ When handed in at Local Office 6th Nov 1908 Port of Greenock.

No. in Reg. Book. ____ Survey held at Port Glasgow. Date, First Survey 11th Sept Last Survey 30th Sept 1908.

on the Screw Steamer "Ventura de Larrinaga" (Number of Visits 3.)

Master G.B. Thomson Built at Port Glasgow. By whom built Russell & Co. Tons Gross 4647.53. Net 2970.36.

Engines made at Glasgow. By whom made D. Rowan & Co. When built 1908. when made 1908.

Boilers made at Glasgow. By whom made D. Rowan & Co. when made 1908.

Registered Horse Power ____ Owners Miguel de Larrinaga Steamship Co. Ltd belonging to Liverpool

Nom. Horse Power as per Section 28 ____ Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted ____

## ENGINES, &c.—Description of Engines ____ No. of Cylinders ____ No. of Cranks ____

Dia. of Cylinders ____ Length of Stroke ____ Revs. per minute ____ Dia. of Screw shaft (as per rule ____ as fitted ____) Material of screw shaft ____

Is the screw shaft fitted with a continuous liner the whole length of the stern tube ____ Is the after end of the liner made water tight in the propeller boss ____ If the liner is in more than one length are the joints burned ____ If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ____ If two liners are fitted, is the shaft lapped or protected between the liners ____ Length of stern bush ____

Dia. of Tunnel shaft (as per rule ____ as fitted ____) Dia. of Crank shaft journals (as per rule ____ as fitted ____) Dia. of Crank pin ____ Size of Crank webs ____ Dia. of thrust shaft under collars ____ Dia. of screw ____ Pitch of Screw ____ No. of Blades ____ State whether moveable ____ Total surface ____

No. of Feed pumps ____ Diameter of ditto ____ Stroke ____ Can one be overhauled while the other is at work ____

No. of Bilge pumps ____ Diameter of ditto ____ Stroke ____ Can one be overhauled while the other is at work ____

No. of Donkey Engines ____ Sizes of Pumps ____ No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room ____ In Holds, &c. ____

No. of Bilge Injections ____ sizes ____ Connected to condenser, or to circulating pump ____ Is a separate Donkey Suction fitted in Engine room & size ____

Are all the bilge suction pipes fitted with roses ____ Are the roses in Engine room always accessible ____ Are the sluices on Engine room bulkheads always accessible ____

Are all connections with the sea direct on the skin of the ship Yes ✓ Are they Valves or Cocks Both ✓

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates ____ Are the Discharge Pipes above or below the deep water line ____

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel ____ Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes.

What pipes are carried through the bunkers ____ How are they protected ____

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times ____

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges ____

Dates of examination of completion of fitting of Sea Connections 30/9/08 ✓ of Stern Tube 11/9/08 ✓ Screw shaft and Propeller 30/9/08 ✓

Is the Screw Shaft Tunnel watertight ____ Is it fitted with a watertight door ____ worked from ____

## BOILERS, &c.—(Letter for record ____) Manufacturers of Steel ____

Total Heating Surface of Boilers ____ Is Forced Draft fitted ____ No. and Description of Boilers ____

Working Pressure ____ Tested by hydraulic pressure to ____ Date of test ____ No. of Certificate ____

Can each boiler be worked separately ____ Area of fire grate in each boiler ____ No. and Description of Safety Valves to each boiler ____ Area of each valve ____ Pressure to which they are adjusted ____ Are they fitted with easing gear ____

Smallest distance between boilers or uptakes and bunkers or woodwork ____ Mean dia. of boilers ____ Length ____ Material of shell plates ____

Thickness ____ Range of tensile strength ____ Are the shell plates welded or flanged ____ Descrip. of riveting: cir. seams ____ long. seams ____ Diameter of rivet holes in long. seams ____ Pitch of rivets ____ Lap of plates or width of butt straps ____

Per centages of strength of longitudinal joint (rivets ____ plate ____) Working pressure of shell by rules ____ Size of manhole in shell ____

Size of compensating ring ____ No. and Description of Furnaces in each boiler ____ Material ____ Outside diameter ____

Length of plain part (top ____ bottom ____) Thickness of plates (crown ____ bottom ____) Description of longitudinal joint ____ No. of strengthening rings ____

Working pressure of furnace by the rules ____ Combustion chamber plates: Material ____ Thickness: Sides ____ Back ____ Top ____ Bottom ____

Pitch of stays to ditto: Sides ____ Back ____ Top ____ If stays are fitted with nuts or riveted heads ____ Working pressure by rules ____

Material of stays ____ Diameter at smallest part ____ Area supported by each stay ____ Working pressure by rules ____ End plates in steam space: Material ____ Thickness ____ Pitch of stays ____ How are stays secured ____ Working pressure by rules ____ Material of stays ____

Diameter at smallest part ____ Area supported by each stay ____ Working pressure by rules ____ Material of Front plates at bottom ____

Thickness ____ Material of Lower back plate ____ Thickness ____ Greatest pitch of stays ____ Working pressure of plate by rules ____

Diameter of tubes ____ Pitch of tubes ____ Material of tube plates ____ Thickness: Front ____ Back ____ Mean pitch of stays ____

Pitch across wide water spaces ____ Working pressures by rules ____ Girders to Chamber tops: Material ____ Depth and thickness of girder at centre ____ Length as per rule ____ Distance apart ____ Number and pitch of stays in each ____

Working pressure by rules ____ Superheater or Steam chest; how connected to boiler ____ Can the superheater be shut off and the boiler worked separately ____ Diameter ____ Length ____ Thickness of shell plates ____ Material ____ Description of longitudinal joint ____ Diam. of rivet holes ____ Pitch of rivets ____ Working pressure of shell by rules ____ Diameter of flue ____ Material of flue plates ____ Thickness ____

If stiffened with rings ____ Distance between rings ____ Working pressure by rules ____ End plates: Thickness ____ How stayed ____

Working pressure of end plates ____ Area of safety valves to superheater ____ Are they fitted with easing gear ____



W647-0172

## VERTICAL DONKEY BOILER— *Manufacturers of Steel*

*No.* ..... *Description* .....

*Made at* ..... *By whom made* ..... *When made* ..... *Where fixed* .....

*Working pressure* ..... *tested by hydraulic pressure to* ..... *Date of test* ..... *No. of Certificate* ..... *Fire grate area* ..... *Description of Safety Valves* .....

*No. of Safety Valves* ..... *Area of each* ..... *Pressure to which they are adjusted* ..... *Date of adjustment* .....

*If fitted with easing gear* ..... *If steam from main boilers can enter the donkey boiler* ..... *Dia. of donkey boiler* ..... *Length* .....

*Material of shell plates* ..... *Thickness* ..... *Range of tensile strength* ..... *Descrip. of riveting long. seams* .....

*Dia. of rivet holes* ..... *Whether punched or drilled* ..... *Pitch of rivets* ..... *Lap of plating* ..... *Per centage of strength of joint* *Rivets* ..... *Plates* .....

*Working pressure of shell by rules* ..... *Thickness of shell crown plates* ..... *Radius of do.* ..... *No. of stays to do.* ..... *Dia. of stays* .....

*Diameter of furnace Top* ..... *Bottom* ..... *Length of furnace* ..... *Thickness of furnace plates* ..... *Description of joint* .....

*Working pressure of furnace by rules* ..... *Thickness of furnace crown plates* ..... *Stayed by* .....

*Diameter of uptake* ..... *Thickness of uptake plates* ..... *Thickness of water tubes* ..... *Dates of survey* .....

## SPARE GEAR. *State the articles supplied :—*

*The foregoing is a correct description,*

*Manufacturer.*

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*Dates of Survey while building* { *During progress of work in shops-* } 1908. Feb 11. 24. 30. ✓
{ *During erection on board vessel* - - }
*Total No. of visits* 3.

*Is the approved plan of main boiler forwarded herewith* .....
" " " *donkey* " " "

**Dates of Examination of principal parts**—*Cylinders* ..... *Slides* ..... *Covers* ..... *Pistons* ..... *Rods* .....

*Connecting rods* ..... *Crank shaft* ..... *Thrust shaft* ..... *Tunnel shafts* ..... *Screw shaft* ..... *Propeller* .....

*Stern tube* ..... *Steam pipes tested* ..... *Engine and boiler seatings* ..... *Engines holding down bolts* .....

*Completion of pumping arrangements* ..... *Boilers fixed* ..... *Engines tried under steam* .....

*Main boiler safety valves adjusted* ..... *Thickness of adjusting washers* .....

*Material of Crank shaft* ..... *Identification Mark on Do.* ..... *Material of Thrust shaft* ..... *Identification Mark on Do.* .....

*Material of Tunnel shafts* ..... *Identification Marks on Do.* ..... *Material of Screw shafts* ..... *Identification Marks on Do.* .....

*Material of Steam Pipes* ..... *Test pressure* .....

**General Remarks** (*State quality of workmanship, opinions as to class, &c.*

Propeller, Stern Bush and fastenings of Sea connections Examined before launching and found in good condition. ✓

*(The Surveyors are requested not to write on or below the space for Committee's Minute.)*

*Certificate (if required) to be sent to* .....

| | | | | |
|---|---|---|---|---|
| The amount of Entry Fee .. | £ | : | : | When applied for, |
| Special .. .. .. | £ | : | : | .....19..... |
| Donkey Boiler Fee .. .. | £ | : | : | When received, |
| (Travelling Expenses (if any) | £ | : | : | .....19..... |

GLASGOW 10 NOV. 1908

*Committee's Minute*

*Assigned* See minute on accompanying report. WMc

W. R. Austin.

*Engineer ~~Surveyor to Lloyd's~~ Register of British & Foreign Shipping.*